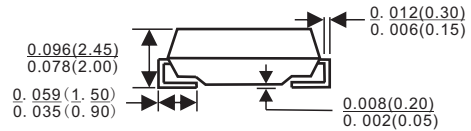
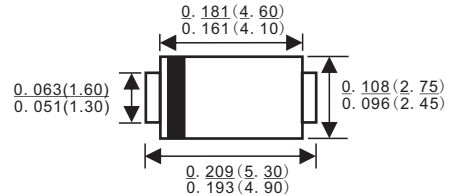




### SMA/DO-214AC

#### Features

- ◇ For surface mounted application
- ◇ Easy pick and place
- ◇ Metal to silicon rectifier, majority carrier conduction
- ◇ Low power loss, high efficiency
- ◇ High current capability, low VF
- ◇ High surge current capability
- ◇ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ◇ Epitaxial construction
- ◇ High temperature soldering: 260°C / 10 seconds at terminals



#### Mechanical Data

- ◇ Case: JEDEC SMA/DO-214AC Molded plastic
- ◇ Terminals: Pure tin plated, lead free
- ◇ Polarity: Indicated by cathode band
- ◇ Packaging: 12mm tape
- ◇ Weight: 0.064 gram

Dimensions in inches and(millimeters)

#### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	SS 12	SS 13	SS 14	SS 15	SS 16	SS 19	SS 110	SS 115	SS 120	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	90	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	105	150	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	90	100	150	200	V
Maximum Average Forward Rectified Current at $T_L$ (See Fig. 1)	$I_{(AV)}$	1.0									A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	30									A
Maximum Instantaneous Forward Voltage (Note 1) $I_F=1.0A$ @ 25°C @ 100°C	$V_F$	0.5		0.75		0.80		0.90		V	
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	$I_R$	0.4			0.1					mA	
		10			5.0		2.0			mA	
Maximum DC Reverse Current at $V_R=33V$ & $T_A=50^\circ C$	$HT_{IR}$	-			5.0						uA
Typical Junction Capacitance (Note 3)	$C_j$	50									pF
Typical Thermal Resistance ( Note 2 )	$R_{\theta JL}$	28									°C/W
	$R_{\theta JA}$	88									
Operating Temperature Range	$T_J$	-65 to +125			-65 to +150						°C
Storage Temperature Range	$T_{STG}$	-65 to +150									°C

- Notes:
1. Pulse Test with PW=300 usec, 1% Duty Cycle
  2. Measured on P.C.Board with 0.2" x 0.2" (5.0mm x 5.0mm) Copper Pad Areas.
  3. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

### RATINGS AND CHARACTERISTIC CURVES (SS12 THRU SS120)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

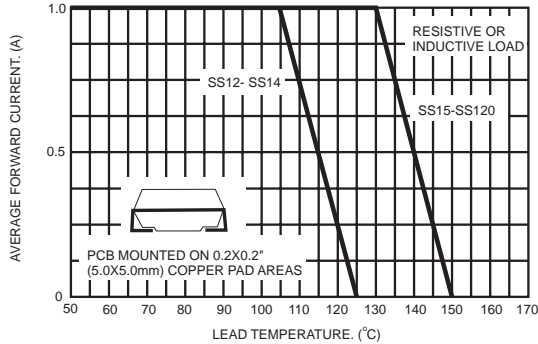


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

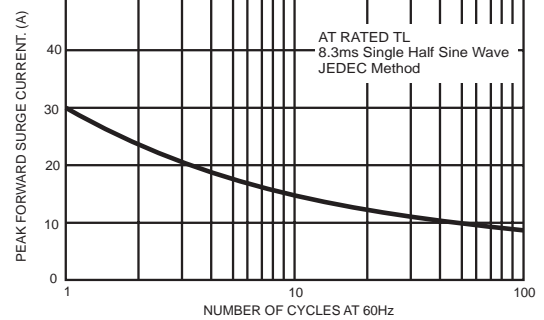


FIG.3- TYPICAL FORWARD CHARACTERISTICS

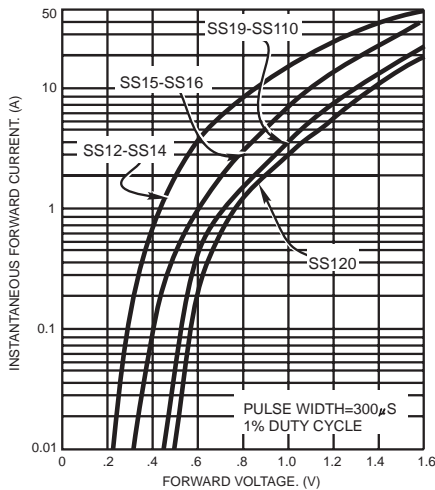


FIG.4- TYPICAL REVERSE CHARACTERISTICS

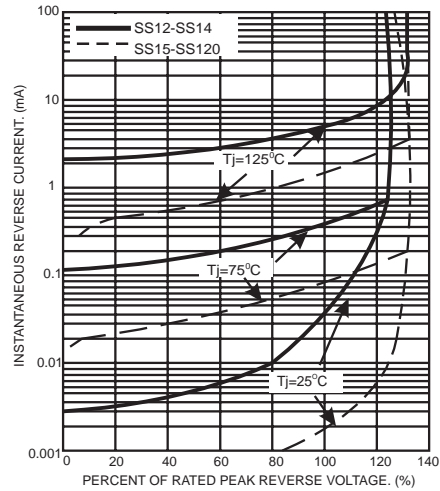


FIG.5- TYPICAL JUNCTION CAPACITANCE

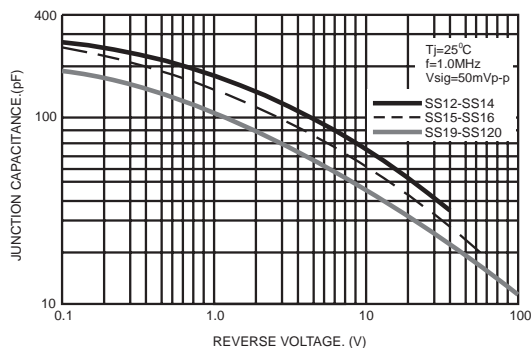
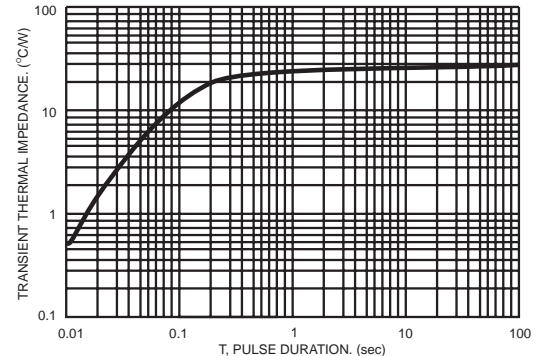


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMA	5000/REEL	80000	36X30.6X31	12.00	11.00

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